

The Planck List of High-z source candidates : A laboratory for high-z star-forming galaxies

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on behalf of the Planck collaboration

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Abstract. The Planck satellite (Planck 2015 results. I) has provided the first FIR/submm all-sky survey with a sensitivity allowing us to identify the rarest, most luminous high-z dusty star-forming sources on the sky. The Planck list of high-z source candidates (PHZ, PIP XXXIX subm) has been built and characterized over 25% of the sky by selecting the 2151 brightest red submm sources at a 5' resolution (Montier *et al.* 2010). Follow-up observations with Herschel/SPIRE over 228 Planck candidates have already shown that 93% of these candidates are actually overdensities of red sources (PIP XXVII 2015), while 12 Planck high-z candidates are identified as strongly lensed star-forming galaxies at redshift between 2.2 and 3.6 (Canameras *et al.* 2015). The first confirmed Planck proto-cluster candidate has been revealed to be a double structure at $z = 1.7$ and $z = 2.03$ (Flores-Cacho *et al.* 2015). The PHZ opens a new window on these extreme star-forming systems at high-z, providing a powerful laboratory to study the mechanisms of galaxy evolution and enrichment in the frame of the large scale structure growth.

Keywords. submillimeter, galaxies: high-redshift, stars: formation, galaxies: clusters: general, cosmology: large-scale structure of universe

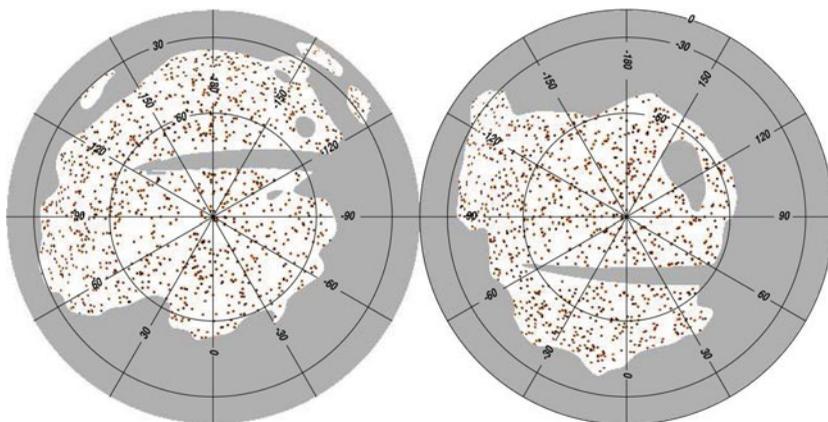


Figure 1. All-sky distribution of the PHZ sources

References

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